(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



# 

### (43) International Publication Date 14 April 2005 (14.04.2005)

PCT

# (10) International Publication Number WO 2005/033376 A2

(51) International Patent Classification7: C25D 5/34, 7/12

(21) International Application Number:

PCT/JP2004/014698

(22) International Filing Date:

29 September 2004 (29.09.2004)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(30) Priority Data:

2003-345062

2 October 2003 (02.10.2003) J

2004-035594

12 February 2004 (12.02.2004)

(71) Applicant (for all designated States except US): EBARA CORPORATION [JP/JP]; 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP).

(72) Inventors; and

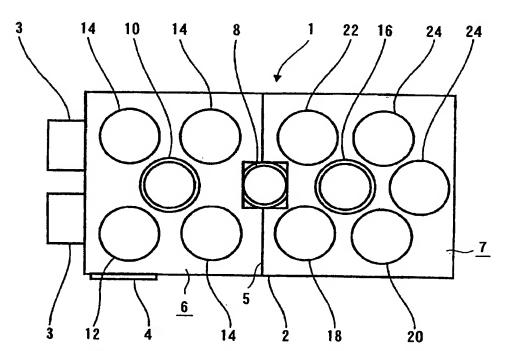
(75) Inventors/Applicants (for US only): KURIYAMA, Fumio [JP/JP]; c/o Ebara Corporation, 11-1, Haneda

Asahi-cho, Ohta-ku, Tokyo 1448510 (JP). KIUMI, Rei [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP). SAITO, Nobutoshi [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP). TAKEMURA, Takashi [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP). KIMURA, Masaaki [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP). TAKEDA, Sachiko [JP/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP). GUO, Yugang [CN/JP]; c/o Ebara Corporation, 11-1, Haneda Asahi-cho, Ohta-ku, Tokyo 1448510 (JP).

- (74) Agents: WATANABE, Isamu et al.; Gowa Nishi-Shin-juku 4F, 5-8, Nishi-Shinjuku 7-chome, Shinjuku-ku, Tokyo 1600023 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG,

[Continued on next page]

(54) Title: PLATING METHOD AND APPARATUS



(57) Abstract: A plating apparatus (1) has a steam treatment chamber (18) configured to perform a steam treatment using steam on a surface of a substrate (W), and a plating chamber (24) configured to plate the surface of the substrate subjected to the steam treatment. The plating apparatus also has an acid treatment chamber (20) configured to bring the surface of the substrate subjected to the steam treatment into contact with an acid liquid. The plating apparatus includes a frame (2) housing the steam treatment chamber (18), the acid treatment chamber (20), and the plating chamber (24).

\*11

### WO 2005/033376 A2



KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.